Appendix B
Notation

a_B	Bay tidal amplitude
a_o	Ocean tidal amplitude
$\hat{a}_B$	Dimensionless bay tidal amplitude
A	Cross-sectional area of the channel
A_B	Bay surface area
A_c	Channel cross-sectional area
A_{c^*}	Critical cross-sectional area
A_{CE}	Cross-sectional area of throat
A_i	Cross-sectional area of ith channel segment
C	Chezy bed resistance coefficient
C_a	Sediment concentration in the bed layer
C_h	Concentration of suspended sediment at a distance h above the bed
C_K	Coefficient accounting for nonsinusoidal variation of current
d	Depth
E	Elasticity
F	Impedance
F_e	Force due to elasticity
F_g	Force due to gravity
F_i	Inertial force
F_{pr}	Force due to pressure
F_{st}	Force due to surface tension
F_μ	Force due to viscosity
g	Acceleration due to gravity
h_c	Mean channel depth
h_i	Depth of ith channel segment
i	Inlet channel segment number (from 1 to m)
k_{en}	Entrance loss coefficient
k_{ex}	Exit loss coefficient
K	Keulegan's repletion coefficient
L	Representative length
L_c	Channel length
L_h	Horizontal length ratio
L_r	Model-prototype length ratio used for scaling
L_v	Vertical length ratio
m	Total number of channel segments
M	Total annual littoral drift
M_{mean}	Average rate of longshore transport
n	Manning's bed resistance coefficient
p	Pressure
p	Coefficient in channel width-depth relationship
P	Tidal prism
q	Exponent in channel width-depth relationship
Q	Discharge through channel
Q_b	Bed-load transport rate
Q_d	Rate of sediment deposition per unit width of channel
Q_f	Freshwater discharge from upstream sources
Q_m	Maximum discharge through channel
Q_{max}	Maximum discharge to inlet
Q_s	Total suspended load on the updrift side of the channel

Q_{s1}	Rate of transport of suspended load reaching the channel
Q_{s2}	Transport rate across the channel
r	Ratio of transport rate to inlet discharge used to characterize bypassing
S	Bay storage volume
t	Time
T_r	Time ratio
u	Current velocity in channel
u_m	Maximum current velocity in channel
$\hat{u}_m$	Dimensionless maximum channel velocity
V	Current velocity in channel
V_{max}	Maximum channel velocity
V'_{max}	Dimensionless maximum channel velocity
V_T	Threshold velocity for sand transport
W_c	Width at inlet throat
α	Dimensionless tidal frequency
α_1	Coefficient in relationship between C and A_c
α_2	Coefficient in relationship between C and A_c
β	Dimensionless dissipation coefficient
β	Stability index
γ	Kinematic viscosity
ε	Lag of slack water after high or low water in the ocean
η	Instantaneous water surface elevation relative to mean water level
η_B	Instantaneous water surface elevation in the bay
η_o	Instantaneous water surface elevation in the ocean
λ	Stability index
μ	Dynamic viscosity
ν	Dimensionless maximum velocity
ν_E	Equilibrium value of ν
ρ	Density
σ	Surface tension
σ	Tidal frequency
τ	Angular measure of the lag of slack water in the channel after midtide in the ocean
Ω	Tidal prism